

**ACROSS BIOTECH**

MAKE A DIFFERENCE

## Certificate of Analysis

Item:	Thiamine hydrochloride feed grade	Cas No.:	67-03-8
Manufacturing Date:	2019/05/11	Bath No:	2019051102
Expiry Date:	.2021/05/10	Quantity:	1000KGS
Package	25kg/drum	Standard:	BP2015/USP38

Test Item	Specification	Result
Standard	BP2015	
Appearance	White or almost white crystalline	Passed
Identification	(1)should be positive reaction (2)Consistent with the reference IR spectra	(1)positive reaction (2)Consistent with the reference IR spectra
Appearance of solution	Clear, not ,more intense than Y7	Passed
PH	2.7-3.3	3.0
Sulphates	NMT300ppm	<300ppm
Sulphated ash	NMT0.1%	0.02%
Heavy metals	NMT20ppm	<20ppm
Water	NMT5.0%	3.45%
Residual Solvents		
Methanol	NMT0.3%	<0.3%
Ethanol	NMT0.5%	<0.5%
Related substances (Disregard limit 0.05%)		
Any impurity	NMT0.4%	<0.05%
Total impurities	NMT1.0%	<0.05%
Assay	98.5-101.0%	99.8%
Standard	USP38	
Identification	A:IR absorption; B:Tests of chloride	Passed
Absorbance of solution	NMT0.025	0.017
Limit of nitrate	No brown ring product at the junction of the two layers	Passed
PH	2.7-3.4	3.2
Water	NMT5.0%	3.27%
Residue on ignition	NMT0.2%	0.02%
Related compounds	NMT1.0%	0.11%
Residual solvent		
Methanol	NMT0.3%	0.0019%
Ethanol	NMT0.5%	0.0189%
Assay(on anhydrous basis)	98.0%-102.0%	99.6%
Conclusion: This batch complies with the specification of BP2015/USP38.		